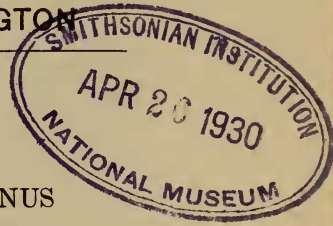


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTONA REVIEW OF THE VIREONINE GENUS
PACHYSYLVA.

BY W. E. CLYDE TODD.

To the late Robert Ridgway, more perhaps than to any other one man, ornithologists the world over are indebted for the great advance in our systematic knowledge of North American birds that has marked the last fifty years. The eight published volumes of his "Birds of North and Middle America," brought out at the culmination of his scientific career, stand as a monument to his erudition, his sound judgment, his tirelessness in pursuit of truth. His treatment of many of the difficult problems encountered as his work progressed will doubtless stand as the final word for many years to come. While primarily concerned with the birds found north of the Isthmus of Panama, numerous extralimital genera and species are treated incidentally. One wonders what Ridgway's genius could have accomplished with South American birds had he had access to the series now available for study, instead of to the wholly inadequate material on which in most cases he was forced to rely. In offering the present modest contribution to help fill this gap, the writer is well aware that his own efforts fall far short of the standard set by the master workman, but the work itself is the model he has tried to keep before him.

During the past several years the growth of the bird collections of the Carnegie Museum, largely coming from tropical America, has resulted in bringing in good series of many species which have heretofore been little known. Among others the birds of the genus *Pachysylvia* have benefited, until the series of this group alone have reached an even six hundred specimens,

representing no less than twenty-four species and subspecies. In attempting to identify these some difficulty has been encountered, due to the eminently unsatisfactory and out-of-date treatment accorded the group by Gadow, the latest available authority, in Volume VIII of the Catalogue of the Birds of the British Museum, and to the scattered references in the literature. The present paper has been prepared with the object of collating the synonymy and descriptions of the several forms, and bringing our general knowledge of them down to the present date. In addition to the series in the Carnegie Museum, access has been had to a certain amount of material in other collections, as follows: the American Museum of Natural History, the Museum of Comparative Zoology, the United States National Museum (including the Biological Survey Collection), the Field Museum of Natural History, and the private collection of Mr. Donald R. Dickey of Pasadena, California. To the authorities in charge of these several collections thanks are due for such courtesies extended. I am also under obligations to Dr. C. E. Hellmayr of the Field Museum for his valuable manuscript notes on several species, kindly placed at my disposal. No effort has been made to give a full list of references to the literature, only the first citation under each name having been quoted. The names of colors are mostly from Ridgway's "Color Standards and Color Nomenclature." Measurements, where given, are in millimeters, and unless otherwise stated are the average of a series of specimens. The length of the bill is that of the exposed culmen. Measurements of specimens of this group in the Carnegie Museum collection have mostly been made by Miss Ruth Trimble.

Genus *Pachysylvia* Bonaparte.

Hylophilus (not *Hylophila* Hübner, 1816) TEMMINCK, Pl. Col. III, livr. 29, 1822, pl. 173, fig. 1 and text (type, *H. poicilotis* Temminck, by designation of Gray, 1840).

Pachysylvia BONAPARTE, Consp. Avium, I, 1850, 309 (type, by monotypy, *Sylvicola decurtata* Bonaparte).

The taxonomic history of this group, given in full by Sclater (*Ibis*, 1881, 293), need not be here repeated. His arrangement was followed by Gadow (*Catalogue Birds British Museum*, VIII, 1883, 305-313), since which time no comprehensive review of the genus has appeared, although no less than twenty-two additional forms have been described. It was Dr. Oberholser

who first called attention to the preoccupation of Temminck's name (Proceedings Biological Society of Washington, XVI, 1903, 101). Nevertheless the International Code would permit the use of the name, but I prefer to adhere to the A. O. U. Code in this regard. The diagnosis of the genus will stand in the main as given by Ridgway in his "Birds of North and Middle America" (Bulletin United States National Museum, No. 50, III, 1904, 214-215). The relative length of the tail, however, varies greatly, from slightly longer than the wing in *P. poicilotis* to the diminutive dimensions found in *P. minor* and *P. decurtata*, at the other end of the series. Twenty-three species and twelve additional subspecies, two of which are here described as new, are recognized in the present review. Only one form, *P. flaviventris*, the type of which is unique, has not been examined in this connection. The *Sylvia flaveola* of Wied (Beiträge Naturgeschichte Brasilien, III, ii, 1831, 719), which has been placed in this genus, is not identifiable from the description, and the type is not extant, so that the name may be disregarded. The geographical range of the group is from southern Mexico to northern Argentina, but only one outlying species reaches the former country, while all those occurring north of Panama are obviously related to forms from the South American continent. The genus as a whole is essentially one of the Tropical Zone, but there are three species which are characteristic of the Subtropical.

Much difficulty has been encountered in drawing up the following key, which is based on comparative characters observable in a series, and one form, *P. flaviventris*, had to be omitted from consideration.

Key to the Species and Subspecies of Pachysylvia
(exclusive of *P. flaviventris*).

- A. Pileum rich rufous brown, sharply defined from the rest of the upper parts.
 - b. Under parts strongly tinged with yellow; tail usually longer than the wing.....*Pachysylvia poicilotis*.
 - b'. Under parts with little or no yellow tinge; tail shorter than the wing.....*Pachysylvia amaurocephala*.
- A'. Pileum otherwise (grayish, tawny, or olivaceous).
 - b. Breast yellowish green, contrasted with the whitish or grayish throat and abdomen.
 - c. Bill and feet dark-colored (plumbeous in life?).....
Pachysylvia thoracica.
 - c'. Bill and feet pale (flesh-color in life?).
 - d. Posterior under parts whitish, yellow-tinged.
 - e. Wings and tail yellowish green.....*Pachysylvia pectoralis*.
 - e'. Wings and tail grayish.....*Pachysylvia sclateri*.
 - d'. Posterior under parts pale grayish.
 - e. Pileum strongly washed with gray.....
Pachysylvia griseiventris griseiventris.
 - e'. Pileum with little or no grayish tinge.....
Pachysylvia griseiventris amula.

- b'. Breast otherwise.
- c. Under parts (at least from the breast down) pallid neutral gray, almost uniform, or with a slight tinge of yellowish green on the breast and sides, but no buffy.
- d. Fore crown pale olive green.
- e. Nape with a broad gray band.....
Pachysylvia semicinerea semicinerea.
- e'. Nape with no decided gray band.....
Pachysylvia semicinerea viridiceps.
- d'. Fore crown dull sepia.....*Pachysylvia brunneiceps.*
- c'. Under parts otherwise (if grayish, also with a buffy tinge on the breast).
- d. Tail brownish.
- e. Crown olivaceous, like the back.
- f. Supraloral spot or streak pale buffy.....
Pachysylvia luteifrons.
- f'. Supraloral spot or streak antique brown.
- g. Under parts not uniform; throat and breast honey yellow; abdomen ecru olive.....
Pachysylvia rubrifrons rubrifrons.
- g'. Under parts nearly uniform, primrose yellow....
Pachysylvia rubrifrons lutescens.
- e'. Crown ochraceous, different from the back.
- f. Back more olivaceous.
- g. Paler, purer olivaceous above.....
Pachysylvia ochraceiceps viridior.
- g'. Darker, duller olivaceous above.
- h. Wing-edgings more olivaceous; general coloration darker.....
Pachysylvia ochraceiceps ferrugineifrons.
- h'. Wing-edgings more brownish; general coloration lighter.....
Pachysylvia ochraceiceps bulunensis.
- f'. Back more brownish.
- g. Back, wings, etc., more olive brown; breast less buffy.....*Pachysylvia ochraceiceps nelsoni.*
- g'. Back, wings, etc., deeper brown; breast more buffy.....*Pachysylvia ochraceiceps ochraceiceps.*
- d'. Tail greenish.
- e. Tail relatively longer, averaging 44 mm. or more in male.
- f. Pileum greenish, like the back.
- g. Larger; wing of male averaging 60 mm. or more.
- h. Under parts deep olive buff, almost uniform
Pachysylvia insularis.
- h'. Under parts buffy whitish, the throat, breast, and sides olive yellow.....*Pachysylvia olivacea.*
- g'. Smaller; wing of male averaging less than 60 mm.

- h. Under parts deep olive buff.....
Pachysylvia flavipes acuticauda.
- h'. Under parts dull buffy yellow.....
Pachysylvia flavipes flavipes.
- h''. Under parts brighter (amber) yellow.....
Pachysylvia viridiflava.
- f'. Pileum more or less brownish.
 - g. Under parts (except the throat) yellowish.
 - h. Upper parts purer, lighter green.
 - i. General coloration paler.....
Pachysylvia aurantiifrons aurantiifrons.
 - i'. General coloration darker.....
Pachysylvia aurantiifrons saturata.
 - h'. Upper parts duller, darker green.
 - i. Throat paler, more grayish white; rest of under parts richer and purer yellow....
Pachysylvia hypoxantha albigula.
 - i'. Throat more buffy; rest of under parts duller and darker yellow.....
Pachysylvia hypoxantha hypoxantha.
 - g'. Under parts dull grayish white, tinged with greenish and buffy.
 - h. Pileum and sides of neck Brussels brown....
Pachysylvia semibrunnea.
 - h'. Pileum dull brown (between sepia and snuff brown), the sides of the neck paler.....
Pachysylvia inornata.
- f''. Pileum gray.
 - g. Throat and breast paler buffy.....
Pachysylvia muscipapina muscipapina.
 - g'. Throat and breast deeper buffy.....
Pachysylvia muscipapina griseifrons.
- e'. Tail relatively shorter, averaging less than 40 mm. in male.
 - f. Pileum greenish, like the back.
 - g. Under parts more brightly colored.....
Pachysylvia minor minor.
 - g'. Under parts less brightly colored.....
Pachysylvia minor darienensis.
 - f'. Pileum gray, different from the back.....
Pachysylvia decurtata.

***Pachysylvia poicilotis* (Temminck).**

Hylophilus poicilotis TEMMINCK, Pl. Col., livr. 29, 1822, pl. 173, fig. 2, and text ([Ypanema, São Paulo], Brazil—cf. Hellmayr, Field Mus. Zool. Ser., XII, 1929, 263, note).

Description.—Pileum dull antique brown, with (sometimes) a dull

grayish nuchal band behind; upper parts, and wings and tail externally, warbler green, the outer primaries narrowly edged with grayish white; sides of the head grayish, the ear-coverts mottled with darker color; throat dull grayish, with more or less buffy yellowish wash, which increases and deepens on the breast, and becomes almost "solid" dull wax yellow on the sides and flanks, leaving only the middle of the abdomen buffy white; crissum pale yellow; under wing-coverts and inner edgings of the remiges also pale yellow; bill and feet dark-colored (in skin).

Measurements.—Male: wing, 57; tail, 57.5; bill, 11; tarsus, 17.2. Female: wing, 55; tail, 57; bill, 11; tarsus, 17.5.

Range.—Southern Brazil (Rio de Janeiro to Santa Catharina), westward to Paraguay and Misiones, Argentina.

Remarks.—Temminck's figure is easily recognizable as applicable to the present form, although the coloring is none too accurate. His type was a skin in the Vienna Museum collected by Natterer at Ypanema, as we learn from Dr. Hellmayr. Other travellers have since extended its latitudinal range somewhat, and Mr. Ernest G. Holt has recently traced it to an altitude of 5900 feet on the slopes of Itatiaya. This is the only species of *Pachysylvia* which has the tail regularly equal to or even a little longer than the wing.

Pachysylvia amaurocephala (Nordmann).

Sylvia amaurocephala NORDMANN, in Erman's Reise, Naturhist. Atlas, 1835, 14 ([boundary between Minas Geraës and Bahia], Brazil—cf. Hellmayr, Field Mus. Zool. Ser., XII, 1929, 262).

Pachysylvia amaurocephala cearensis SNETHLAGE, Journ. f. Orn., LXXIII, 1925, 266 (São Paulo, Serra de Ibiapaba, Ceará, Brazil).

Description.—Pileum Brussels brown, sharply defined from the neutral gray of the nape, which passes into the dull serpentine green of the upper parts, tail, and wing-coverts; remiges externally similar but rather brighter (yellowish citrine); sides of the head dull grayish white, with indistinct paler superciliaries; throat and upper breast pale smoke gray, passing into dull pinkish buff on the abdomen and crissum; sides and flanks shaded with olive lake; under wing-coverts and inner edges of the remiges citron yellow; "iris brown; feet gray; bill black, the mandible light gray."

Measurements.—Five specimens (both sexes): wing, 52.5; tail, 48.5; bill, 10.5; tarsus, 17.

Range.—Eastern Brazil, from Piauí and Ceará to São Paulo.

Remarks.—Dr. Hellmayr (l. c.) says that this form completely intergrades with *P. poicilotis* in São Paulo, as shown by Natterer's series in the Vienna Museum. There are two skins from "Bahia" in the series examined which are brighter above and below, and might be considered as approaching the form in question. The single São Paulo skin of *poicilotis* seen, however, is perfectly typical, and moreover, I can not understand why intergradation should take place in this State when specimens from Rio de Janeiro, farther east, are also typical *poicilotis*. Aside from the color-differences, which are well marked, there is a difference in pro-

portions, the tail being shorter than the wing in *amaurocephala*, but a little longer in *poicilotis*. So I should prefer to keep them specifically distinct for the present. But I fully agree with Dr. Hellmayr in relegating *cear-ensis* Snethlage to synonymy.

Pachysylvia thoracica (Temminck).

Hylophilus thoracicus TEMMINCK, Pl. Col., livr. 29, 1822, pl. 173, fig. 1, and text ([Rio de Janeiro], Brazil—cf. Hellmayr, Nov. Zool., XIII, 1906, 355, and XV, 1908, 20).

Description.—Upper parts in general, wings externally, and tail dull green (between warbler green and citrine); pileum and nape deep grayish olive, tinged with dull citrine, especially on the forehead; sides of the head similar but duller; throat dull grayish white, passing into wax yellow on the breast; under wing-coverts brighter (strontian yellow), and inner webs of the remiges edged with the same color; rest of the under surface white, with a light tinge of creamy buff; bill and feet dark-colored (bluish gray in life?).

Measurements.—One male: wing, 59; tail, 55; bill, 12; tarsus, 19.

Range.—State of Rio de Janeiro, southeastern Brazil.

Remarks.—Temminck's figure is a fairly good representation, except that the gray on the head is of too blue a shade, and his description fits the single specimen examined (No. 147,075, Collection American Museum of Natural History, La Raiz, foot of Organ Mountains, Rio de Janeiro) very well. The bill and feet are represented as dark-colored. This is important, showing that this feature is of diagnostic value, and is not due to immaturity.

Selater (Ibis, 1881, 298) and Gadow (Catalogue Birds British Museum, VIII, 1883, 307) confused this species with *P. pectoralis*. The error was corrected by von Berlepsch and Hartert (Novitates Zoologicae, IX, 1902, 11). It is in fact unknown beyond the confines of the State of Rio de Janeiro, as shown by Dr. Hellmayr (Novitates Zoologicae, XV, 1908, 20).

Pachysylvia flaviventris (Cabanis).

Hylophilus flaviventris CABANIS, Journ. f. Orn., 1873, 64 (Monterico, Peru).

Description.—"Pileum and nape (abruptly defined posteriorly) light earthy brown, with a slight olivaceous tinge, caused by certain feathers being laterally edged with dull yellowish olive; back brownish olive green (hard to define); rump and upper tail-coverts light yellowish olive green, contrasting with the more brownish mantle (or upper and middle back). Lesser wing-coverts brownish like the upper back; median and greater series duller, more brownish gray, edged with greenish; remiges dusky, exteriorly margined with yellowish olive green, this margin passing into whitish along the apical half on the second to sixth primaries; rectrices dull olive yellowish green, brighter on the edges. Lores and orbital rim dingy white; sides of the head pale earthy brown; cheeks and auriculars slightly

variegated with whitish; throat and foreneck white; remainder of the under surface pale olive yellow, rather dull in tone, the flanks more greenish, and the crissum more yellowish; quill-lining nearly white. Bill pale horn brown, the mandible brownish white; feet dark horn. Fourth primary longest; third and fifth equal and about 1.5 mm. shorter than the fourth; the second is equal to the ninth (counting from without)."

Measurements.—"Wing, 62; tail, 49; bill, 14; tarsus, 16."

Range.—Known only from the type-locality, Monterico, Central Peru.

Remarks.—This species is known from the type-specimen alone. Dr. Hellmayr has kindly sent me the above detailed description and following notes, made some years ago on the specimen in question, in the Warsaw Museum. "A very peculiar species, not to be confused with any other member of the genus. It is particularly well characterized by its elongated slender bill. By possessing a distinct cap this species approaches *P. pectoralis*, but has a much longer, slenderer bill, and differs furthermore, by its brownish mantle, uniform, dull olive yellowish ventral surface (excepting the white throat), without any white on the abdomen, and brownish (instead of light gray) sides of the head, etc."

Pachysylvia pectoralis (Sclater).

Hylophilus pectoralis SCLATER, Proc. Zool. Soc. London, 1866, 321 ([Villa Bella de Mattogrosso], Brazil—cf. Hellmayr, Nov. Zool., XV, 1908, 20).

Hylophilus griseiceps PENARD and PENARD, Vog. Guyana, II, 1910, 538 (Surinam).

Pachysylvia araguayæ REICHENOW, Journ. f. Orn., 1920, 88 (Leopoldina, Rio Araguaya, Goyaz, Brazil).

Pachysylvia thoracicus abariensis CHUBB, Birds Brit. Guiana, II, 1921, 395 (Abary River, British Guiana).

Description.—Pileum and nape plain dull gray (near mouse gray), the sides of the head similar but paler; back, wings externally, and tail dull yellowish green (between warbler green and citrine); throat dull grayish white; breast olive yellow; under wing-coverts strontian yellow; inner webs of the remiges edged with yellowish citrine; tibiæ and crissum washed with the same color; abdomen whitish with a faint buffy grayish wash; bill and feet pale (in skin). The juvenal dress is grayish above, tinged with greenish posteriorly; below whitish, with a pale yellow tinge on the flanks and crissum.

Measurements.—Male: wing, 56.5; tail, 45; bill, 12.3; tarsus, 16. Female: wing, 53.5; tail, 44.5; bill, 12; tarsus, 16.

Range.—Guiana, south to the States of Matto Grosso and Goyaz, Brazil.

Remarks.—This species differs from *P. griseiventris* in having no greenish wash on the pileum, which is uniform gray; and also in the greater extent of the yellow color below, which covers the upper abdomen as well as the breast. The abdomen is more buffy white, less grayish. Otherwise the colors are about the same in both.

I can find no constant differences between specimens from Brazil (States of Maranhão and Pará) and our large series from French Guiana. Birds from British Guiana have been described by Chubb under the name *abariensis*, but topotypes of the latter are also the same. Even if there were a northern race it would have to bear the name applied by the Messrs. Penard in 1910, as Dr. Hellmayr points out (Field Museum Zoological Series, XII, 1929, 262). He adds that the *P. araguayae* of Reichenow is also indistinguishable. Gadow's unfortunate error in the description of *P. pectoralis* may have been responsible for the perpetration of these synonyms.

***Pachysylvia sclateri* (Salvin and Godman).**

Hylophilus sclateri SALVIN and GODMAN, Ibis, 1883, 205 (Mount Roraima, British Guiana).

Description.—Pileum and nape deep neutral gray, the forehead and lores tinged with clay-color, the sides of the head paler gray; back dark warbler green; wings and tail deep mouse gray externally, the outer remiges edged with paler and purer gray; throat buffy white; breast washed with primuline yellow, passing into yellowish citrine on the sides and into dull whitish on the middle of the abdomen; under wing-coverts pale yellow; inner edgings of the remiges whitish; bill and feet brownish (in skin).

Measurements.—Male: wing, 61; tail, 51; bill, 11.7; tarsus, 17.5. Female (one specimen): wing, 60; tail, 49; bill, 12; tarsus, 17.

Range.—Mount Roraima district, British Guiana.

Remarks.—The above description is based on freshly collected specimens in the American Museum of Natural History. A skin collected by Whitely in 1883 has faded appreciably. Some of the specimens have the wings and tail partly edged with the color of the back, instead of grayish; they are perhaps not fully mature. The crissum in some individuals is pure white, while in others it is tinged with pale yellow.

This form combines the yellowish green breast-band of the *thoracica-pectoralis* group with the rufescent forehead of *P. muscipina*, *luteifrons*, etc. It is obviously a Subtropical Zone representative of some lower-ranging form.

***Pachysylvia griseiventris griseiventris* (von Berlepsch and Hartert).**

Hylophilus thoracicus griseiventris VON BERLEPSCH and HARTERT, Nov. Zool., IX, 1902, 11 (Suapure, Caura River, Venezuela).

Description.—Upper parts, wings externally, and tail dull warbler green (between warbler green and olive green); forehead the same, but crown and nape more or less extensively neutral gray; throat dull grayish white, passing into pyrite yellow on the breast; under wing-coverts and inner edges of the remiges similar but brighter; rest of the under parts white with a decided grayish shade (near pallid neutral gray); bill and feet pale (in skin).

Measurements.—Male: wing, 55.5; tail, 45; bill, 13; tarsus, 17. Female: wing, 55; tail, 46; bill, 12.5; tarsus, 16.

Range.—From eastern Venezuela (south of the Orinoco) and Guiana southward to the Rio Purús, Brazil.

Remarks.—This bird was described as a race of *P. thoracica*, but after comparing our series with a specimen of the latter from southern Brazil I am confident that they represent a form specifically distinct. The pale bill and feet and grayish-tinged posterior under parts are very different from those of *thoracica*, in which the bill and feet are dark-colored and the posterior under parts creamy buff. The discontinuous range of *thoracica* and *griseiventris* with reference to each other is another point to be considered.

We have fifteen specimens from French Guiana (Tamanoir and Pied Saut), one from the north bank of the Amazon at Obidos, four from the Rio Purús (Hyutanahan, Nova Olinda, and Arimã), and one from the upper Amazon (São Paulo de Olivença). The skins from the last two regions vary among themselves to a certain extent, in the direction of *æmula*, but some of this variation may be due to age.

***Pachysylvia griseiventris æmula* Hellmayr.**

Pachysylvia thoracica æmula HELLMAYR, Anz. Orn. Ges. Bayern, No. 3, 1920, 15 (Yahuarmayo, Carabaya, southeastern Peru).

Subspecific characters.—Similar to *P. griseiventris griseiventris*, but gray color of the pileum less in extent, sometimes entirely wanting; and throat and posterior under parts more buffy, less grayish in tone. Size about the same.

Range.—Tropical Zone along the eastern base of the Andes, from Colombia to southeastern Peru.

Remarks.—This form is closely related to true *P. griseiventris*, of which it is the western or Andean representative, but in my opinion it is not subspecifically related to *P. thoracica*, which latter has dark-colored feet and bill, and whose known range is moreover disconnected and far removed. An immature example (No. 53,506, Collection Field Museum of Natural History), however, moulting out of the juvenal dress, has dark-colored feet (by comparison) and bill, suggesting such a derivation as would be implied.

Of this form I have examined four specimens, one from "Bogotá," Colombia, one from La Pampa, Peru, and two from Rioja, Peru.

***Pachysylvia semicinerea semicinerea* (Sclater and Salvin).**

Hylophilus semicinereus SCLATER and SALVIN, Proc. Zool. Soc. London, 1867, 570, pl. 30, fig. 2 (Pará, Brazil).

Description.—Above pale olive green (between olive green and dark citrine), with a neutral gray nape-band, poorly defined anteriorly; wings externally and tail like the back; under parts pallid neutral gray, the sides of the breast shaded with sulphine yellow, the abdomen medially nearly

white, the crissum whitish or with a faint yellowish tinge; under wing-coverts and inner edgings of the remiges lemon yellow.

Measurements.—Male: wing, 56.5; tail, 45; bill, 13; tarsus, 17.5. Female: wing, 55; tail, 47; bill, 12.8; tarsus, 17.

Range.—Brazil, south of the Amazon, from the Rio Madeira east to the State of Maranhão.

Remarks.—Dr. Hellmayr (*Novitates Zoologicae*, XIII, 1906, 355; XIV, 1907, 5; XV, 1908, 21) long regarded this form as a race of *P. thoracica*, to which I can not agree, holding that the broad colored breast-band of the latter is a good specific character. He has recently been induced to reverse his opinion (cf. Field Museum Zoological Series, XII, 1929, 261), but on entirely different grounds. The amount of gray on the nape varies considerably, but there is no difference between birds from Pará (Benevides), the type-locality, and the Rio Tapajóz, as he at one time thought might be the case. Birds in immature ("first winter") plumage, with soft skulls, are precisely like adults.

Pachysylvia semicinerea viridiceps, subsp. nov.

Type, No. 65,377, Collection Carnegie Museum, subadult male; Pied Saut, French Guiana, December 14, 1917; Samuel M. Klages.

Subspecific characters.—Similar to *P. semicinerea semicinerea*, but pileum and nape with less grayish tinge, sometimes almost uniform with the back; and under parts averaging paler, more whitish, with the green wash on the breast paler and less extensive. Size about the same.

Range.—Southern Venezuela (Mount Duida) to French Guiana, and southward to the Amazon.

Remarks.—The present form is based on a series of eleven specimens in the collection of the Carnegie Museum from the following localities: Pied Saut, French Guiana; Obidos and Manacapuru, Brazil. In addition there is a skin in the collection of the American Museum of Natural History from the foot of Mount Duida, Venezuela, which I consider referable to the same form. At first glance I thought these were young birds of *P. griseiventris*, but upon closer comparison they appear to represent an unnamed race of *P. semicinerea*, differing in the more greenish, less grayish pileum, and slightly paler lower parts. In *semicinerea* the pileum is decidedly grayish, at least posteriorly, and well contrasted with the back, while in the new form the gray is duller, more overspread with green, and less contrasted with the back. Individual specimens from the two series respectively approach each other, but the series as a whole are sufficiently distinct. As nearly as I can tell, however, all but a few of the series have soft spots in the skull, indicative of immaturity, but on the other hand several examples of *griseiventris* are in the same condition, but are exactly like adults in coloration. Moreover, the juvenal dress of *griseiventris* is yellowish below (the throat and breast), while none of the present lot have any more of this color below than *semicinerea*, and most of them have less.

The discovery of an undoubted geographical variant of *P. semicinerea*, coming from the same localities as *P. griseiventris*, of course disposes of the idea that these two are conspecific.

***Pachysylvia brunneiceps* (Sclater).**

Hylophilus brunneiceps SCLATER, Proc. Zool. Soc. London, 1866, 322 ("Ypanema" [error]=Rio Vaupe, Brazil—cf. von Pelzeln, Orn. Brasilien, 1868, 70, note, and Sclater, Ibis, 1881, 306).

Description.—Pileum dull sepia with a wash of citrine, passing into dull warbler green on the back, tail, and wings externally; sides of the head dull brownish, paler than the pileum; throat and upper breast soiled white, washed with deep olive buff; rest of the under parts white with a grayish shade, the sides and flanks washed with yellowish citrine, the crissum with pale yellowish green; under wing-coverts and inner edges of the remiges amber yellow; bill and feet pale brown (in skin).

Measurements.—One male: wing, 51; tail, 41; bill, 13.5; tarsus, 16.5.

Range.—Northern Brazil (Rio Negro) to southern Venezuela (and east to Guiana?).

Remarks.—In describing this species Sclater attributed it to southern Brazil, having in some way mixed up his specimens and transposed his notes, as pointed out by von Pelzeln (l. c.) and later corrected by Sclater himself. I have seen but one example (No. 121,032, Collection American Museum of Natural History), from San Fernando, upper Orinoco, Venezuela; it fits Sclater's figure (Ibis, 1881, pl. 11, fig. 1) very exactly. I doubt if it occurs in Guiana—French Guiana, at any rate, where Mr. Klages' researches have failed to discover it. It probably occupies the little known region north of the Amazon, along the Rio Madeira and northward to the Orinoco. South of the Amazon it is replaced by *P. inornata* Sneath.

***Pachysylvia luteifrons* (Sclater).**

Hylophilus luteifrons SCLATER, Ibis, 1881, 308 (Bartica Grove, British Guiana).

Hylophilus surinamensis PENARD and PENARD, Vog. Guyana, II, 1910, 538 (Surinam).

Description.—Above dark citrine, the pileum a little darker, more olivaceous, the remiges externally more brownish (orange citrine), the tail still deeper (medal bronze); forehead and supraloral region tinged with dull buffy yellow (but not conspicuously); under parts washed with primrose yellow, the breast usually more buffy (near dark olive buff), the crissum deep colonial buff, as also are the under wing-coverts and inner edgings of the remiges.

Measurements.—Male: wing, 57; tail, 41; bill, 12.5; tarsus, 15. Female: wing, 56; tail, 39; bill, 12; tarsus, 15.

Range.—Guiana, south to the Amazon River, Brazil.

Remarks.—Little is on record concerning the present species, which was at first supposed to be confined to British Guiana. It was found in French Guiana by Mr. George K. Cherrie (cf. von Berlepsch, *Novitates Zoologicae*, XV, 1908, 109), and Mr. S. M. Klages has also sent a good series from that country to the Carnegie Museum. The same collector took a single specimen at Obidos, and Miss Sneath records it from St. Antonio da

Cachoeira, on the Rio Jary, showing that its range reaches to the north bank of the Amazon.

Pachysylvia rubrifrons rubrifrons (Sclater and Salvin).

Hylophilus rubrifrons SCLATER and SALVIN, Proc. Zool. Soc. London, 1867, 569, pl. 30, fig. 1 ([Pará ?], lower Amazon River, Brazil).

Description.—Upper parts dark citrine, the pileum sometimes a little more olivaceous, in but slight contrast; wings externally like the back, the wing-coverts with slight rufescent edgings; tail brown (between Prout's brown and Brussels brown); forehead and supraloral region antique brown; sides of the head in general, and throat and breast, honey yellow, passing into ecru olive on the abdomen and crissum; under wing-coverts reed yellow, and inner edgings of the remiges buffy yellow (near honey yellow).

Measurements.—Male (three specimens): wing, 56; tail, 39; bill, 12.5; tarsus, 15. Female (two specimens): wing, 56; tail, 38.5; bill, 13; tarsus, 16.

Range.—Pará region of northeastern Brazil.

Remarks.—Dr. Hellmayr (*Novitates Zoologicae*, XVII, 1910, 267) says that the type of this species must have come from the Rio Negro. Reasoning by analogy, it would seem unlikely that a form such as *rubrifrons*, which is replaced farther west on the same bank of the Amazon by a different race, would reappear unchanged on the opposite bank. The only specimens with definite localities attached all come from the vicinity of Pará, and in my opinion it is entirely likely that the type-specimen actually came from this place too, where Wallace also collected for a time. An error in labeling may easily have occurred. Dr. Hellmayr's description of the type (an immature bird) points to its being the same as the series from Benevides studied in this connection, the specimens from the Rio Madeira with which he compared it doubtless belonging to *lutescens*. *P. rubrifrons* appears to be represented on the north bank of the Amazon by *P. luteifrons*, as already pointed out. The range of the typical form is probably limited to the westward by either the Rio Tocantins or Rio Xingú.

Pachysylvia rubrifrons lutescens Sneathlage.

Pachysylvia rubrifrons lutescens SNEATHLAGE, Orn. Monatsb., XXII, 1914, 43 (Boim, Rio Tapajóz, Brazil).

Subspecific characters.—Similar to *P. rubrifrons rubrifrons*, but upper parts purer green (near citrine); tail paler brown (Dresden brown); and under parts more uniform, washed with primrose yellow. Size about the same.

Range.—Northern Brazil, south of the Amazon, from the Rio Xingú west to the Rio Madeira.

Remarks.—This form was described as new on the assumption that birds from Pará belong to the typical *rubrifrons*. It differs very decidedly from the latter in being brighter, more yellowish green below, as well as above. Some of our specimens from Miritituba, however, are darker

above and more buffy yellow. Twenty-six specimens in all have been examined in this connection, all from various localities on the Rio Tapajóz (Colonia do Mojuy, Villa Braga, Miritituba, and Apacy).

***Pachysylvia ochraceiceps viridior*, subsp. nov.**

Type, No. 79,588, Collection Carnegie Museum, adult male; Rio Surutu, Bolivia, September 23, 1917; José Steinbach.

Subspecific characters.—Similar to *P. ochraceiceps ferrugineifrons*, but brighter, purer yellowish green (between citrine and dark citrine) above, with less of the brownish suffusion usually so conspicuous in the latter; forehead paler russet (orange citrine rather than antique brown); tail paler and less brownish. Size about the same.

Range.—Santa Cruz region of Bolivia to southeastern Peru, in the Tropical Zone.

Remarks.—The characters above specified, while subject to individual variation in the series of sixteen specimens examined, are sufficiently constant to require the separation of the Bolivian birds under the name here proposed. Under this name I would place also the specimens from southeastern Peru referred to by Dr. Chapman (Bulletin American Museum of Natural History, LV, 1926, 589).

In juvenal dress (No. 50,767, Collection Carnegie Museum) this form is dull buffy citrine above, almost uniform, and soiled white below, shaded with buffy, the crissum pale yellow.

***Pachysylvia ochraceiceps ferrugineifrons* (Sclater).**

Hylophilus ferrugineifrons SCLATER, Proc. Zool. Soc. London, 1862, 110 ("Bogotá"), Colombia).

Description.—Forehead dull antique brown, passing into dull dark citrine on the crown and upper parts, including the wings externally; tail dull medal bronze; under parts in general dull whitish, more or less heavily washed with olive lake or ecru olive, the throat paler, more whitish; under wing-coverts and inner edgings of the remiges reed yellow.

Measurements.—Male: wing, 58.5; tail, 42; bill, 13.3; tarsus, 15.3. Female: wing, 55.5; tail, 40.5; bill, 13; tarsus, 15.

Range.—Tropical Zone of Colombia and Ecuador (east of the Andes), east to the Guiana frontier of Venezuela, and south to the Rio Purús, Brazil.

Remarks.—The above description is based on a skin from Tonantins, Brazil, the place nearest to the type-locality from which a specimen is at present available. It corresponds closely to Sclater's figure of the species in the Ibis, 1881, pl. 11, fig. 2. In a series from eastern Venezuela (Rio Caura and Rio Yuruan) the iris is variously marked as "brown," "white," "gray," and "grayish white"; the bill as "blackish, pale below"; and the feet as "pale leaden blue," etc. They are exactly the same as another series from the Rio Purús, Brazil, and show a decided brownish cast above as compared with birds from Bolivia (*viridior*). We have specimens from Rio Yuruan, Venezuela, and Manacapurú and Caviana, on the middle

Amazon River, Brazil, which localities probably mark the extreme eastern limits of the range of the species. Dr. Chapman records it from eastern Ecuador, so that it evidently occupies an immense area in the drainage systems of the Amazon and Orinoco Rivers, right up to the eastern base of the Andes. West of this range it is replaced by the next form. After study and comparison I have come to believe with Dr. Chapman (Bulletin American Museum of Natural History, LV, 1926, 589) that *ferrugineifrons* should be considered as conspecific with *ochraceiceps* and *bulunensis*.

***Pachysylvia ochraceiceps bulunensis* (Hartert).**

Hylophilus bulunensis HARTERT, Nov. Zool., IX, 1902, 617 (Bulún, Ecuador).

Subspecific characters.—Similar to *P. ochraceiceps nelsoni*, but still more greenish, less brownish; back and wing-coverts almost uniform dark citrine; and lower parts strongly washed with olive yellow, the throat a little duller, grayish white.

Measurements.—Male (two specimens): wing, 58.5; tail, 40; bill, 12.7; tarsus, 16.7. Female: wing, 55; tail, 41; bill, 13; tarsus, 16.3.

Range.—Tropical Zone, Colombian-Pacific Fauna, from eastern Panama to western Ecuador.

Remarks.—This form must stand as a subspecies of *P. ochraceiceps*, all of its characters being merely a further development of those of *P. ochraceiceps nelsoni*, which connects the two extremes systematically as well as geographically. Dr. Chapman did not find it in Colombia, but we have four specimens from the Chocó region (Potodo and Malagita). These are slightly more greenish above than skins from eastern Panama (Mount Pirri and Cana), but are without question the same form. On the other hand, this form is so exactly intermediate in its characters between *nelsoni* and *ochraceiceps* on the one hand and *ferrugineifrons* and *viridior* on the other that I have no choice but to consider them all conspecies, in spite of the fact of their discontinuous distribution by reason of the interposition of the Andean chain.

***Pachysylvia ochraceiceps nelsoni*, nom. nov.**

Pachysylvia ochraceiceps brevipennis (not *Helinai brevipennis* Giraud) NELSON, Smithsonian Misc. Coll., LVI, No. 22, 1911, 1 (Lion Hill, Panama).

Subspecific characters.—Similar to *P. ochraceiceps ochraceiceps*, but upper parts and wings externally with less brownish wash, more greenish; and under parts also slightly more greenish, the breast with less buffy shading.

Measurements.—One male (?) (the type): wing, 54; tail, 38; bill, 13; tarsus, 17. One female (?): wing, 58; tail, 43; bill, 13; tarsus, 17.5.

Range.—Isthmus of Panama.

Remarks.—I strongly suspect that both the above examples are wrongly sexed. If so, then the difference in size to which the describer alludes is of

little importance. After seeing these two specimens, I would recognize the form they represent as a valid one, standing as an intermediate between *ochraceiceps* and *bulunensis*. But because of *Helinai brevipennis* Giraud, Annals Lyceum Natural History of New York, V, 1852, 40, pl. 3, fig. 1, which is a synonym of *Pachysylvia decurtata*, a new name will be necessary in this case, which I supply above, in honor of the original describer.

***Pachysylvia ochraceiceps ochraceiceps* (Sclater).**

Hylophilus ochraceiceps SCLATER, Proc. Zool. Soc. London, 1859, 375 (Playa Vicente, Oaxaca, Mexico).

Pachysylvia ochraceiceps pallidipectus RIDGWAY, Bull. U. S. Nat. Mus., No. 50, III, 1904, 219 (Angostura, Costa Rica).

Description.—Pileum dull yellowish brown (near old gold), passing into Dresden brown on the back, wing-coverts, and tail, the nape more olivaceous, and the rump washed with yellowish citrine; primaries margined externally with old gold, passing into Dresden brown on the secondaries, the primary-coverts olive; supraloral line olive ocher; sides of the head and upper throat dull grayish with a wash of olive; rest of the lower parts dull buffy yellow, the breast and sides more or less strongly washed with olive ocher or olive lake, the flanks more with yellowish citrine; under wing-coverts pale lemon yellow, and inner webs of the remiges edged with deep colonial buff; "iris gray; bill horn brown above, paler below; feet flesh-color."

A juvenal example is almost uniform Dresden brown above, with whitish throat, and the rest of the under parts washed with clay-color.

Measurements.—Male: wing, 59; tail, 44; bill, 13.2; tarsus, 16.5. Female: wing, 57; tail, 44; bill, 13; tarsus, 16.5.

Range.—Southern Mexico (Tropical Zone) to western Panama.

Remarks.—There is so much individual variation in the series examined, considered as a whole, that I fail to see how *pallidipectus* can possibly be maintained. Every character ascribed to this supposed form, tested by this series, fails.

***Pachysylvia insularis* (Sclater).**

Hylophilus insularis SCLATER, Proc. Zool. Soc. London, 1861, 128 (Tobago).

Hylophilus pallidifrons DALMAS, Mém. Soc. Zool. France, XIII, 1900, 135 (Tobago).

Description.—Above varying from deep grayish olive to citrine, grayer on the head, more greenish on the rump, wings externally, and tail; supraloral streak and lower eyelid pale buffy whitish; under parts deep olive buff, almost uniform, the flanks sometimes with a greenish wash, and the crissum sometimes tinged with yellow; under wing-coverts and inner edgings of the remiges pale yellow (amber yellow to naphthalene yellow); bill dark above, pale below; feet pale brown (in skin).

Measurements.—Male: wing, 61; tail, 47; bill, 12.7; tarsus, 19. Female: wing, 61; tail, 47; bill, 13; tarsus, 18.5.

Range.—Island of Tobago.

Remarks.—Dr. Hellmayr writes that he has compared the type of *H. pallidifrons* (now in the Tring Museum) with that of *H. insularis*, and found them identical. The type-specimen of the latter is slightly immature. The description of "*pallidifrons*" fits the series examined very well, except for the measurement of the tail, 57 mm., which is probably an error for 47 mm. The variation in the color of the upper parts is astonishing, but may be due in part to post-mortem changes in the skins. The large size, heavy bill, and grayish coloration serve to separate this species from *P. flavipes acuticauda*, its nearest relative on the mainland. Curiously enough, *P. flavipes* has no representative on Trinidad, and *P. insularis* is an isolated and well differentiated form.

***Pachysylvia olivacea* (von Tschudi).**

Hylophilus olivaceus VON TSCHUDI, Arch. f. Naturg., 1844, 284 (eastern slope of the Andes, Peru).

Description.—Above dull yellowish olive, duller and more brownish on the pileum, the wing- and tail-edgings a little lighter; below buffy whitish, the throat, breast, and sides heavily shaded with olive yellow, and the crissum with amber yellow; under wing-coverts and inner edgings of the primaries massicot yellow; bill and feet pale brown (in skin).

Measurements.—One male: wing, 60; tail, 48; bill, 11.5; tarsus, 17.5. One female: wing, 56; tail, 48; bill, 11.5; tarsus, 18.

Range.—Subtropical Zone, central Peru to eastern Ecuador.

Remarks.—This species, of which I have seen but two specimens (from eastern Ecuador), is hard to place, but gives the impression of being related to *P. flavipes acuticauda*, from which it differs in its relatively longer tail, and more olive greenish or yellowish under parts. It appears to be a Subtropical Zone species. Very few specimens are known at the present time.

***Pachysylvia flavipes acuticauda* (Lawrence).**

Hylophilus acuticaudus LAWRENCE, Proc. Acad. Nat. Sci. Philadelphia, 1865, 37 (Venezuela).

Hylophilus griseipes RICHMOND, Proc. U. S. Nat. Mus., VIII, 1896, 687 (Margarita Island, Venezuela).

Subspecific characters.—Similar to *P. flavipes flavipes*, but general coloration duller; upper parts duller citrine; under surface deep olive buff, paler posteriorly, with little or no yellow tinge.

Measurements.—Male: wing, 56; tail, 44; bill, 12; tarsus, 17.5. Female: wing, 53; tail, 43; bill, 11.7; tarsus, 17.5.

Range.—Venezuela, south (at least) to the Orinoco River and east to the Guiana frontier.

Remarks.—While Ridgway (Bulletin United States National Museum, No. 50, III, 1904, 216, note) would keep this form a distinct species, von

Berlepsch and Hartert (*Novitates Zoologicae*, IX, 1902, 12) reduce it to a subspecies of *P. flavipes*—rightly so, as I believe. It is much more buffy below than true *flavipes*, lacking the yellow tinge present in most specimens of that form, at least in fresh plumage. The supposed difference in the color of the feet apparently does not hold, judging from the labels; both forms vary in this respect, but do not differ from each other. In juvenal dress (No. 34,042, Collection Carnegie Museum) the under parts are white, shaded anteriorly and laterally with buffy; the pileum is ashy brown; and the bill is blackish.

Intergradation between this form and true *flavipes* takes place in western Venezuela, in the Maracaibo basin. The southern range of *acuticauda* remains to be worked out. I can find no records from Guiana, but specimens in the Carnegie Museum bring it close to the borders of that country.

With eight specimens from Margarita Island before me (including the type of *H. "griseipes"* Richmond), I can find no sufficient grounds for separating them from mainland specimens of *acuticauda*. Dr. Richmond does not mention the latter at all; he compared his skins from that island directly with *flavipes* from Colombia, from which they of course differ just as he says. So "*griseipes*" falls as a synonym of *acuticauda*.

Lawrence's type-specimen no doubt came from the coast region of northern Venezuela. In order to get a definite starting-point I hereby propose to fix the type-locality as Puerto La Cruz, State of Carabobo, Venezuela.

Pachysylvia flavipes flavipes (Lafresnaye).

Hylophilus flavipes LAFRESNAYE, Rev. Zool., 1845, 342 ("Bogotá," Colombia).

Description.—Above dark citrine, duller on the pileum, brighter on the rump and wings externally; tail similar; a pale supraloral streak; sides of the head, and breast and throat, dull buffy yellow, brightening into deep colonial buff on the abdomen and crissum; under wing-coverts amber yellow, and inner webs of the remiges citron yellow; "iris straw yellow; bill blackish horn, flesh-color below; feet flesh-color" (Carriker).

Measurements.—Male: wing, 57; tail, 46; bill, 12; tarsus, 17. Female: wing, 55; tail, 45.5; bill, 11.7; tarsus, 17.

Range.—Tropical Zone of Colombia.

Remarks.—The above description is based on the more yellowish extreme examples. There is a great deal of variation in color in the series examined, due partly to season and age, and partly to individual differences. The feet are marked variously "bluish flesh-color," "pale purplish flesh-color," "dusky flesh-color," and even "pale leaden blue." As might be expected, specimens from the eastern base of the Eastern Andes vary more in the direction of *acuticauda*, and moreover are somewhat larger than the average bird of the region of the Rio Sinu, where this form appears to reach its greatest degree of differentiation, and from which the most brightly colored examples in the main seem to come. It is thus unfortunate that "Bogotá" remains the type-locality for this form. Of

course it does not occur so high up as that, but only at the foot of the mountains. Specimens from Villavicencio should doubtless be considered topotypical.

***Pachysylvia viridiflava* (Lawrence).**

Hylophilus viridiflavus LAWRENCE, Ann. Lyc. Nat. Hist. New York, VII, 1861, 324 ([Lion Hill ?], Panama Railroad, Panama).

Description.—Upper parts in general (including wings externally and tail) warbler green, the pileum duller (near citrine); supraloral streak dull whitish; sides of the head dull brownish gray; under parts (near) amber yellow, the throat paler, more grayish, and the breast shaded with olive lake; under wing-coverts and inner edgings of the remiges amber yellow; “iris straw-color; feet plumbeous; bill light horn-color above, flesh-color below” (Carriker). Younger birds may readily be told by their black bills; the iris is marked as “gray” in all such.

Measurements.—Two males: wing, 57, 60; tail, 44, 46; bill, 12, 12.5; tarsus, 18, 18.5. Two females: wing, 56, 56; tail, 47, 48; bill, 12, 12.5; tarsus, 17.5, 18.5.

Range.—Panama and southwestern Costa Rica (Tropical Zone).

Remarks.—The nearest known ally of this form is *P. flavipes flavipes* of Colombia, than which it is much more brightly colored. There appears to be a break in the distribution of the forms, however, in eastern Panama, where neither has yet been found, and this circumstance, taken in connection with the degree of difference between them, suffices to justify the recognition of *viridiflava* as a distinct species. In southwestern Costa Rica, according to Mr. Carriker (Annals Carnegie Museum, VI, 1910, 777) it ranges from sea-level up to about 2000 feet.

***Pachysylvia aurantiifrons aurantiifrons* (Lawrence).**

Hylophilus aurantiifrons LAWRENCE, Ann. Lyc. Nat. Hist. New York, VII, 1862, 324 ([Lion Hill ?], Panama Railroad, Panama).

Description.—Pileum buffy brown, the forehead strongly tinged with olive ochre or isabella color, the sides of the head paler and more buffy; back, wings externally, and tail yellowish citrine; throat and breast dull whitish with more or less of a buffy wash; the rest of the under parts washed with barium yellow, deepest and purest on the flanks and crissum; under wing-coverts and inner edgings of the remiges citron yellow to barium yellow; “iris brown; feet plumbeous; bill dusky horn, flesh-color below.”

Measurements.—Male: wing, 56; tail, 44; bill, 13; tarsus, 16.5. Female: wing, 54; tail, 43; bill, 12.7; tarsus, 16.

Range.—Caribbean coast region of Colombia, westward to the Isthmus of Panama.

Remarks.—The restricted range of this form is a marked feature. It is not known to enter the Magdalena and Cauca Valleys, or the Pacific coast region of Colombia.

***Pachysylvia aurantiifrons saturata* Hellmayr.**

Pachysylvia aurantiifrons saturata HELLMAYR, Nov. Zool., XIII, 1906, 12 (Caparo, Trinidad).

Subspecific characters.—Similar to *P. aurantiifrons aurantiifrons*, but under parts more brightly colored, with more buffy or ochraceous wash on the chest.

Measurements.—Male: wing, 56; tail, 45; bill, 13; tarsus, 16.3. Female: wing, 53; tail, 43; bill, 12.5; tarsus, 16.5.

Range.—Caribbean coast region of Venezuela, eastward to Trinidad. Also in the interior of Colombia, east of the Eastern Andes.

Remarks.—Selected individual specimens of the series at hand are quite indistinguishable from the average example of true *aurantiifrons*, but the respective series are separable by the difference in general coloration, the present form being more richly colored—more suffused with yellow, with the buffy shade on the breast more in evidence, especially in birds in freshly assumed plumage, like those from Trinidad shot in August. Specimens from the Carabobo region of Venezuela average less brightly colored than those from Trinidad. Birds from the Maracaibo region, on the other hand, are richly colored, although mostly collected in early May, and rather worn.

Ridgway (Bulletin United States National Museum, No. 50, III, 1904, 215) was the first to distinguish this race, but confused it with *P. hypoxantha*, which is another bird entirely, and it remained for Dr. Hellmayr to give it the name under which it now passes.

A single specimen (No. 60,643, Collection Carnegie Museum) from Palmar, Colombia, at the eastern foot of the Eastern Andes, which could be referred to *aurantiifrons* as easily as to *saturata*, shows that the species is not as strictly confined to the coast as has been supposed. Further light on its range in this part of the country will be awaited with interest.

***Pachysylvia hypoxantha albigula* Chapman.**

Pachysylvia fuscicapilla albigula CHAPMAN, Am. Mus. Nov., No. 18, 1921, 11 (Sta. Julia, Rio Iriri, Brazil).

Subspecific characters.—Similar to *P. hypoxantha hypoxantha*, but throat paler, more grayish white, less buffy; rest of the under parts richer and purer yellow (pale lemon yellow); and upper parts more richly colored (citrine instead of buffy olive).

Measurements.—Three males: wing, 60; tail, 45; bill, 14; tarsus, 15.5. Four females: wing, 56; tail, 42; bill, 13; tarsus, 15.

Range.—Brazil, south of the Amazon, from the Rio Xingú to the Rio Purús.

Remarks.—The type-specimen I have not seen, but eight specimens from the Rio Purús (Hyutanahan, Nova Olinda, and Arimã) and one from Caviana (on the south bank of the Amazon, opposite Manacapurú) differ from two skins from Tonantins, presumably representing true *hypoxantha*, as above said. It will be noted that while Dr. Chapman describes the

under parts as "paler and less uniform than in *fuscicapilla*" (i. e., *hypoxantha*), I find the opposite to be the case. So there is a possibility that we are dealing here with a different race from the one he has described.

***Pachysylvia hypoxantha hypoxantha* (von Pelzel).**

Hylophilus hypoxanthus VON PELZELN, Orn. Brasiliens, ii, 1868, 71, 136 (Rio Içanna and Rio Vaupé, Rio Negro, Brazil).

Hylophilus fuscicapillus SCLATER and SALVIN, Proc. Zool. Soc. London, 1880, 155 ("Sarayacu," Ecuador).

Description.—Pileum dull olive brown, passing into the buffy olive of the back; wings externally and tail somewhat brighter (yellowish olive); sides of the head pale buffy brown, the eyelids slightly paler; throat dull buffy whitish; rest of the under parts (including under wing-coverts) pale yellow (barium yellow), the breast with a slight buffy wash; inner webs of the remiges edged with pale dull yellow, as also are the inner webs of the rectrices.

Measurements.—One male: wing, 60; tail, 46; bill, 12; tarsus, 16. Two females: wing, 56; tail, 41; bill, 12.5; tarsus, 15.

Range.—Northwestern Brazil, north of the Amazon, east to the mouth of the Rio Negro, and west to eastern Ecuador.

Remarks.—Two females from Tonantins, Rio Solimoës, in the Carnegie Museum collection, answer pretty well to Sclater's description and figure of *Hylophilus fuscicapillus* in the Ibis, 1881, 303, pl. 10, fig. 2, the throat, however, not being yellow as in the figure, but dull buffy or soiled whitish. Dr. Hellmayr writes me as follows: "*P. fuscicapilla* = *P. hypoxantha*. I have compared a bird from Pebas, Peru, with the types in the British Museum, and later with von Pelzel's examples, and could not discover any difference. So their identity is well established." This is what we would expect in view of the relatively close positions of the respective type-localities. The species is a near relative of *P. aurantiifrons*.

A male example from Manacapurú (No. 98,651, Collection Carnegie Museum) greatly extends the known range of this form. It differs from the Tonantins skins in its rather darker, duller coloration, and may possibly represent a different race.

***Pachysylvia semibrunnea* (Lafresnaye).**

Hylophilus semibrunneus LAFRESNAYE, Rev. Zool., 1845, 341 ("Bogotá," Colombia).

Pachysylvia semibrunnea leucogastra CHAPMAN, Am. Mus. Nov. No. 143, 1924, 1 (below San José de Sumaco, eastern Ecuador).

Description.—Pileum and nape Brussels brown, this color spreading over the sides of the neck as far as the ear-coverts, and sometimes over the back also; upper parts in general, and wings and tail externally, dull green (near serpentine green), the wing-coverts and primaries with slight paler edgings, and the tail also with slight yellowish internal edgings; lores, slight eye-

brow, subocular region, and throat soiled whitish; under parts dull whitish, tinged with buffy rufous on the sides of the breast and with pale greenish yellow on the sides and flanks; crissum and under wing-coverts barium yellow, and inner webs of the secondaries edged with the same color, becoming whitish on the primaries; "iris brown; feet leaden blue; bill blackish above, flesh-color below" (Carriker).

Measurements.—Male: wing, 62.5; tail, 50.5; bill, 13.5; tarsus, 16.7. Female: wing, 61.7; tail, 50; bill, 13.3; tarsus, 16.7.

Range.—Subtropical Zone of the Andes of Colombia and of eastern Ecuador.

Remarks.—A topotype of "*leucogastra*" from eastern Ecuador can be closely matched by certain examples of true *semibrunnea*. In the light of our fine series (21 skins) from Colombia, the characters on which this supposed subspecies are based prove to be individual rather than geographical. The amount of brown wash on the back is a variable feature.

P. semibrunnea is a Subtropical Zone species, belonging to the *aurantiifrons-hypoxantha* group, of one of which it is probably a derivative.

Pachysylvia inornata Snethlage.

Pachysylvia inornata SNETHLAGE, Orn. Monatsber., XXVII, 1914, 43 (Cametá, Rio Tocantins, Brazil).

Description.—Pileum dull brown (between sepia and snuff brown), the upper back paler and more greenish (dull orange citrine), and the lower back, tail, and wings externally warbler green, without any brownish wash; sides of the head like the pileum, but paler, with a poorly defined pale orbital ring; throat and upper breast pale olive gray, and rest of the under parts similar, the breast, sides, and flanks more or less strongly washed with yellowish citrine, the crissum citron yellow; under wing-coverts and inner edgings of the innermost secondaries citron yellow; rest of the remiges edged internally with naphthalene yellow.

A bird in juvenal dress (No. 74,383, Collection Carnegie Museum) differs in having the pileum and back rusty buff, and the lower surface much duller.

Measurements.—Male: wing, 59; tail, 47; bill, 13; tarsus, 16. Female: wing, 58; tail, 46; bill, 13; tarsus, 16.5.

Range.—Brazil, south of the Amazon, from the Rio Tapajóz east to the Rio Tocantins.

Remarks.—This form differs from *P. brunneiceps* in its larger size, more decidedly brownish upper parts, grayish (instead of pale brownish) throat and breast, and greenish-suffused lower breast and abdomen. The yellow of the remiges is also paler (except that on the inner secondaries). I would keep the two specifically distinct, and while Dr. Hellmayr does not agree to this disposition, he may be quite right in insisting on the close relationship of the two forms in question. For the present, however, I am suggesting a relationship to the group represented by *P. aurantiifrons*, *P. hypoxantha*, etc., as shown by the key to the species (*antea*). Twenty-one specimens have been examined in this connection, all from the Rio Tapajóz.

***Pachysylvia muscipapina muscipapina* (Sclater and Salvin).**

Hylophilus muscipapinus SCLATER and SALVIN, Nom. Avium Neotrop., 1873, 156 (Cayenne, French Guiana).

Description.—Pileum and nape neutral gray, the superciliaries and sides of the head buffy rufous in abrupt contrast; upper parts, wings externally, and tail bright serpentine green; under parts white, the throat and breast washed with rufous buff, the sides of the breast with dull greenish, and the abdomen with grayish; crissum and under wing-coverts citron yellow.

Measurements.—Male: wing, 60; tail, 46; bill, 14.5; tarsus, 15.5. Female: wing, 56; tail, 43; bill, 13.5; tarsus, 15.

Range.—Eastern Venezuela (Caura River) and Guiana, south to the Amazon River, Brazil.

Remarks.—Venezuelan specimens closely resemble those from French Guiana, the type-locality, and birds from Obidos, on the north bank of the Amazon, are also the same. On the south bank of that stream the species is represented by the next form. *P. muscipapina* is a rather isolated species genetically, without any very close allies.

***Pachysylvia muscipapina griseifrons* Sneath.**

Pachysylvia muscipapina griseifrons SNETHLAGE, Orn. Monatsber., XV, 1907, 160 (Villa Braga, Rio Tapajóz, Brazil).

Subspecific characters.—Similar to *P. muscipapina muscipapina*, but upper parts slightly brighter green; sides of the head, superciliaries, etc., deeper buffy rufous; and throat and breast more strongly suffused with the same color. The gray of the pileum continues over the forehead as a pure color, instead of being tinged with buffy, as usual in the typical race. Size about the same.

Range.—From the Rio Tapajóz, west to (probably) the Rio Madeira, Brazil.

Remarks.—A series of seventeen specimens from the type-locality, and one more from Apacy, bear out Dr. Hellmayr's remarks (Novitates Zoologicae, XVII, 1910, 268) on the characters of this race. It is evidently confined to the region south of the Amazon, between the Madeira and Tapajóz Rivers.

***Pachysylvia minor minor* (von Berlepsch and Taczanowski).**

Hylophilus minor VON BERLEPSCH and TACZANOWSKI, Proc. Zool. Soc. London, 1883, 542 (Chimbo, Ecuador).

Description.—Above warbler green, the pileum and wings externally darker (near olive green), the outer primaries edged with pale greenish white; tail still duller olive greenish; lores, sides of the head, and throat palhd neutral gray; rest of the under parts white with a pale buffy tinge, the sides of the breast, the flanks, and the crissum shaded with strontian yellow; under wing-coverts and inner edgings of the primaries pale buffy yellow; bill and feet pale brown (in skin).

Measurements.—Two males: wing, 54, 56; tail, 37, 41; bill, 12, 13.5; tarsus, 18, 18.5. One female: wing, 52; tail, 36; bill, 12.5; tarsus, 17.5.

Range.—Tropical Zone of western Ecuador.

Remarks.—This was described by von Berlepsch and Taczanowski from three specimens collected at Chimbo by Stolzmann, and has since been taken by other collectors in various localities in this general region (cf. Chapman, Bulletin American Museum of Natural History, LV, 1926, 590). With *P. decurtata* of Central America, it belongs to a group characterized by small size and a relatively short tail, and standing thus at the opposite end of the series from *P. poicilotis*.

***Pachysylvia minor darienensis* Griscom.**

Pachysylvia minor darienensis GRISCOM, Am. Mus. Nov. No. 282, 1927, 7 (Cape Garachiné, eastern Panama).

Subspecific characters.—Similar in size and general coloration to *P. minor minor*, but under parts not so brightly colored, the greenish yellow of the sides and flanks paler and more restricted.

Range.—Tropical Zone of Colombia (Magdalena Valley and Pacific coast district), northward to eastern Panama.

Remarks.—Dr. Chapman, in recording the heretofore only known specimen of *P. minor* from Colombia (Bulletin American Museum of Natural History, XXXVI, 1917, 541), commented on the differences it showed in comparison with Ecuador skins. We have four examples from the Chocó region of western Colombia (Andagoya, Malagita, and Cordoba) in the collection of the Carnegie Museum, and also two from El Tambor, in the valley of the Rio Lebrija, a tributary of the Magdalena. These have been compared with the Los Cisneros specimen cited by Dr. Chapman, and found to be identical. They also agree well with a skin from Mt. Sapo, and with a topotype of *darienensis* from Cape Garachiné. This indicates that this pale race of *minor* is the one inhabiting Colombia as well as eastern Panama. According to Mr. Griscom it lives in the tops of the tallest trees, and is consequently very difficult to collect. In our two skins from El Tambor the iris is marked as "brown; feet pale leaden blue; bill black, bluish flesh below" (Carriker).

***Pachysylvia decurtata* (Bonaparte).**

Sylvicola decurtata BONAPARTE, Proc. Zool. Soc. London, 1837, 118 (Mexico).

Helinae brevipennis GIRAUD, Ann. Lyc. Nat. Hist. New York, V, 1852, 40, pl. 3, fig. 1 ("Mexico and Texas").

Hylophilus cinereiceps SCLATER and SALVIN, Proc. Zool. Soc. London, 1860, 299 (Choctum, Vera Paz, Guatemala).

Hylophilus pusillus LAWRENCE, Ann. Lyc. Nat. Hist. New York, VII, 1862, 323 ([Lion Hill?], Panama Railway, Panama).

Pachysylvia decurtata pallida DICKEY and VAN ROSSEM, Proc. Biol. Soc. Washington, XL, 1927, 4 (Puerto del Triunfo, Usulután, Salvador).

Description.—Pileum and nape neutral gray to deep neutral gray, and the sides of the head similar but paler, with a brownish wash; orbital ring white; upper parts warbler green, and wings externally the same, except the outer primaries, which are more grayish; tail similar but duller; under parts dull whitish, the sides, flanks, and crissum more or less washed with pyrite yellow or yellowish citrine; under wing-coverts pale yellow, and inner edges of the remiges whitish; "iris dark hazel; bill light bluish; feet light blue" (Peck).

Measurements.—Male: wing, 53; tail, 36.5; bill, 12; tarsus, 16. Female: wing, 51.5; tail, 34; bill, 12; tarsus, 16.5.

Range.—Isthmus of Panama northward through Central America to Vera Cruz, Mexico, in the Tropical Zone.

Remarks.—This is one of the few species of *Pachysylvia* which has suffered from too many names. Ridgway suspected the existence of a small southern race, and very recently Mr. Bangs (Bulletin Museum Comparative Zoology, LXVII, 1927, 483) has agreed to recognize such a race under Lawrence's name *pusilla*. Messrs. Dickey and Van Rossem have also named a supposed pale Pacific coast race. With some of their skins before me, and a series from western Nicaragua called by the same name, also a good series from Mexico and Costa Rica, my finding is that the differences alleged to exist between *decurtata*, "*pusilla*," and "*pallida*" are too slight to recognize by name.

Pachysylvia decurtata is the Central American representative of *P. minor*. In its pattern of coloration it bears a remarkable resemblance to the Tennessee Warbler, *Vermivora peregrina*.